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SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Identification of the substance

Article number

Registration number (REACH)

Multi-Element MISA ICP-OES-Standard Solution 1 ROTI®Star 18 elements in 5 % HNO_3

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not relevant (mixture)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:

Uses advised against:

Laboratory and analytical use Laboratory chemical

Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone:+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment sheet:

e-mail (competent person):

sicherheit@carlroth.de

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Centre Beaumont Hospital	Beaumont Road	Dublin 9	01 809 2166	https:// www.poisons.ie/

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
2.16	Substance or mixture corrosive to metals	1	Met. Corr. 1	H290
3.2	Skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	Serious eye damage/eye irritation	1	Eye Dam. 1	H318



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Sup	pleme	ntal hazard information
С	ode	Supplemental hazard information
EU	JH071	corrosive to the respiratory tract

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word	Danger	
Pictograms	^	
GHS05		
Hazard statemen	ts	
H290 H314	May be corrosive to metals Causes severe skin burns an	d eye damage
Precautionary sta	itements	
Precautionary sta	tements - prevention	
P280	Wear protective gloves/prote	ctive clothing/eye protection/face protection
Supplemental ha	zard information	
EUH071	Corrosive to the respiratory t	ract.
Hazardous ingred	lients for labelling:	Nitric acid% [C ≤ 70 %]
Labelling of packages Signal word: Danger	where the contents do not exceed 12	25 ml

Symbol(s)



H314	Causes severe skin burns and eye damage.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
EUH071 contains:	Corrosive to the respiratory tract. Nitric acid% [C \leq 70 %]

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2.3 **Other hazards**

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 **Substances**

not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of sub- stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Nitric acid% [C ≤ 70 %]	CAS No 7697-37-2 EC No 231-714-2 Index No 007-030-00-3	5	Ox. Liq. 3 / H272 Met. Corr. 1 / H290 Acute Tox. 3 / H331 Skin Corr. 1A / H314 Eye Dam. 1 / H318 EUH071		B(a) GHS-HC IOELV

Notes

B(a): The classification refers to an aqueous solution GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/ 2008/EC, Annex VI)

IOELV: Substance with a community indicative occupational exposure limit value

Name of sub- stance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
Nitric acid% [C ≤ 70 %]	CAS No 7697-37-2 EC No 231-714-2	Ox. Liq. 3; H272: C ≥ 65 % Skin Corr. 1A; H314: C ≥ 20 % Skin Corr. 1B; H314: 5 % ≤ C < 20 %	-	2,65 ^{mg} /ı/4h	inhalation: va- pour
	Index No 007-030-00-3				

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 **Description of first aid measures**



General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment re-





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quired because corrosive injuries that are not treated are hard to cure.

Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

Following ingestion

Rinse mouth immediately and drink plenty of water. Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

4.2 Most important symptoms and effects, both acute and delayed

Corrosion, Gastric perforation, Risk of serious damage to eyes, Risk of blindness, Cough, Dyspnoea, Pulmonary oedema

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NOx)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

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6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provide adequate ventilation as well as local exhaustion at critical locations. Handle and open container with care. Clear contaminated areas thoroughly.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Keep only in original container. May cause decomposition by long-term light influence.

Incompatible substances or mixtures

Observe hints for combined storage.

Protect against external exposure, such as

UV-radiation/sunlight, contact with air/oxygen

Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
EU	nitric acid	7697-37- 2	IOELV			1	2,6				2006/15/ EC

according to Regulation (EC) No. 1907/2006 (REACH)



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Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
IE	nitric acid	7697-37- 2	OELV			1	2,6				S.I. No. 619 of 2001

Notation

Τ\//Δ

Ceiling-C Ceiling value is a limit value above which exposure should not occur STEL Short-term exposure limit: a limit value above which exposure shoul

Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15minute period (unless otherwise specified) Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8

Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection. Wear face protection.

Skin protection



hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

FKM (fluoro rubber), Butyl caoutchouc (butyl rubber)

material thickness

0,5 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

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Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: NO-P3 (against nitrous gases and particles, colour code: Blue/White).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	clear
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	83 °C at 1.013 hPa
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	<2 (20 °C)
Kinematic viscosity	not determined
Solubility(ies)	
Water solubility	miscible in any proportion
Partition coefficient	
Partition coefficient n-octanol/water (log value):	not relevant (inorganic)
Vapour pressure	23 hPa at 20 °C
Density and/or relative density	
Density	~1 ^g / _{cm³} at 20 °C
Relative vapour density	information on this property is not available
Particle characteristics	not relevant (liquid)





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	Other safety parameters	
	Oxidising properties	none
9.2	Other information	
	Information with regard to physical hazard classes:	
	Corrosive to metals	category 1: corrosive to metals
	Other safety characteristics:	
	Miscibility	completely miscible with water
CEC.		

SECTION 10: Stability and reactivity

10.1 Reactivity

Substance or mixture corrosive to metals.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: Acetone, Aldehydes, Alkali (lye), Alkali metals, Alcohols, Formic acid, Amines, Ammonia (NH3), Aniline, Combustible materials, Dichloromethane, Alkaline earth metal, Acetic anhydride, Hydrazine, Hydrocarbons, Metal powder, Nitriles, Reducing agents, Strong alkali, Hydrogen peroxide,

=> Explosive properties

10.4 Conditions to avoid

UV-radiation/sunlight. Keep away from heat.

10.5 Incompatible materials

different metals

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.





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Acute toxicity estimate (ATE) of components of the mixture					
Name of substance	CAS No	Exposure route	ATE		
Nitric acid% [C ≤ 70 %]	7697-37-2	inhalation: vapour	2,65 ^{mg} / _l /4h		

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Nitric acid% [C ≤ 70 %]	7697-37-2	inhalation: va- pour	LC50	>2,65 ^{mg} / _l /4h	rat

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

• If in eyes

causes burns, Causes serious eye damage, risk of blindness

• If inhaled

corrosive to the respiratory tract, cough, Dyspnoea, pulmonary oedema

• If on skin

causes severe burns, causes poorly healing wounds

• Other information

none



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- **11.2 Endocrine disrupting properties** None of the ingredients are listed.
- **11.3 Information on other hazards** There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

- **12.2 Persistence and degradability** Data are not available.
- **12.3 Bioaccumulative potential** Data are not available.
- **12.4 Mobility in soil** Data are not available.
- **12.5 Results of PBT and vPvB assessment** Data are not available.
- **12.6 Endocrine disrupting properties** None of the ingredients are listed.
- **12.7** Other adverse effects Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Properties of waste which render it hazardous

- **HP 6** acute toxicity
- HP8 corrosive

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

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SEC	TION 14: Transport information	
14.1	UN number or ID number	
	ADRRID	UN 2031
	IMDG-Code	UN 2031
	ICAO-TI	UN 2031
14.2	UN proper shipping name	
	ADRRID	NITRIC ACID
	IMDG-Code	NITRIC ACID
	ICAO-TI	Nitric acid
14.3	Transport hazard class(es)	
	ADRRID	8
	IMDG-Code	8
	ICAO-TI	8
14.4	Packing group	
	ADRRID	II
	IMDG-Code	II
	ICAO-TI	II
14.5	Environmental hazards	non-environmentally hazardous acc. to the dan- gerous goods regulations
14.6	Special precautions for user	
	Provisions for dangerous goods (ADR) should be co	omplied within the premises.
14.7	Maritime transport in bulk according to IMO in	struments
	The cargo is not intended to be carried in bulk.	
14.8	Information for each of the UN Model Regulation	ons

Information for each of the ON Model Regulations

Agreement concerning the International Carria information	age of Dangerous Goods by Road (ADR)Additional
Proper shipping name	NITRIC ACID
Particulars in the transport document	UN2031, NITRIC ACID, 8, II, (E)
Classification code	C1
Danger label(s)	8
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2
Tunnel restriction code (TRC)	E



Safety data sheet

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Hazard identification No	80
Regulations concerning the International information	Carriage of Dangerous Goods by Rail (RID)Additional
Classification code	C1
Danger label(s)	8
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
Transport category (TC)	2
Hazard identification No	80
International Maritime Dangerous Goods	Code (IMDG) - Additional information
Proper shipping name	NITRIC ACID
Particulars in the shipper's declaration	UN2031, NITRIC ACID, 8, II
Marine pollutant	-
Danger label(s)	8
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-A, S-B
Stowage category	D
Segregation group	1 - Acids
International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information
Proper shipping name	Nitric acid
Particulars in the shipper's declaration	UN2031, Nitric acid, 8, II
Danger label(s)	8
Excepted quantities (EQ)	E2
Limited quantities (LQ)	0,5 L

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according to Regulation (EC) No. 1907/2006 (REACH)





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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

Dangerous substances with restrictions (REACH, Annex XVII)				
Name of substance	Name acc. to inventory	CAS No	Restriction	No
Multi-Element	this product meets the criteria for classification in accordance with Reg- ulation No 1272/2008/EC		R3	3
Nitric acid% [C ≤ 70 %]	substances in tattoo inks and perman- ent make-up		R75	75

Legend R3

1. Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,

- tricks and jokes,

- games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
2. Articles not complying with paragraph 1 shall not be placed on the market.
3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume,

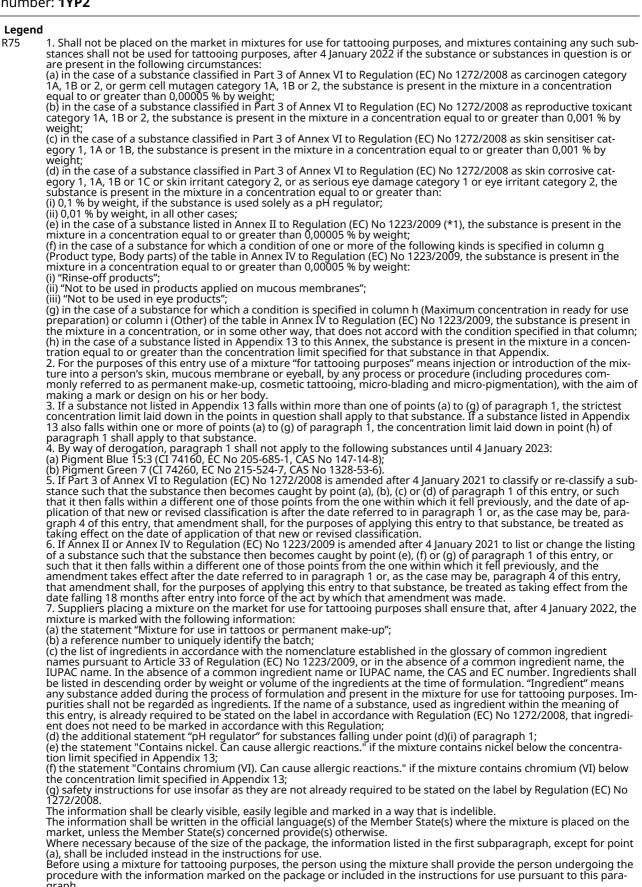
or both, if they:
— can be used as fuel in decorative oil lamps for supply to the general public, and
— present an aspiration hazard and are labelled with H304.
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation

(CEN). 5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and pack-aging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following require-ments are met:

ments are met: (a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage"; (b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter fluid may lead to life threatening lung damage'; (c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.';

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graph.





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Legend

8. Mixtures that do not contain the statement "Mixture for use in tattoos or permanent make-up" shall not be used for tattooing purposes.

9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).

10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list

None of the ingredients are listed.

Seveso Directive

2012/	18/EU (Seveso III)		
Νο	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the ap- plication of lower and upper-tier re- quirements	Notes
	not assigned		

Deco-Paint Directive

VOC content	0 % 0 ^g / ₁	
-------------	--------------------------------------	--

Industrial Emissions Directive (IED)

VOC content	0 %
VOC content (Water content was discounted)	0 g/l

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Regulation on the marketing and use of explosives precursors

xplosives precursors which are subject to restrictions						
Name of substance	CAS No	Wt%	Type of registration	Re- marks	Limit value	Upper limit value for the pur- pose of licens- ing un- der Art- icle 5(3)
Nitric acid% [C ≤ 70 %]	7697-37-2	5	Annex I		3 % w/w	10 % w/w

Legend

annex I

Substances which shall not be made available to members of the general public on their own, or in mixtures or substances including them, except if the concentration is equal to or lower than the limit values set out below

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Additional statements

If the product is passed on to third parties, in accordance with Article 7 "Notification of the supply chain" of Regulation EU 2019/1148, the information obligation is subject to the entire supply chain and all other provisions mentioned in Article 7 on restricted and regulated raw materials.

Regulation on drug precursors

none of the ingredients are listed

Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	not all ingredients are listed
CA	DSL	not all ingredients are listed
CA	NDSL	not all ingredients are listed
CN	IECSC	not all ingredients are listed
EU	ECSI	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
KR	KECI	not all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	not all ingredients are listed
PH	PICCS	not all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	not all ingredients are listed
US	TSCA	not all ingredients are listed

Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NDSL	Non-domestic Substances List (NDSL)
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Req.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

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15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations	
2006/15/EC	5/EC Commission Directive establishing a second list of indicative occupational exposure limit values in im mentation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC	
Acute Tox.	Acute toxicity	
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing the International Carriage of Dangerous Goods by Road)	
ATE	Acute Toxicity Estimate	
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)	
Ceiling-C	Ceiling value	
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures	
DGR	Dangerous Goods Regulations (see IATA/DGR)	
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an ident fier of substances commercially available within the EU (European Union)	
EINECS	European Inventory of Existing Commercial Chemical Substances	
ELINCS	European List of Notified Chemical Substances	
EmS	Emergency Schedule	
Eye Dam.	Seriously damaging to the eye	
Eye Irrit.	Irritant to the eye	
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions	
IATA	International Air Transport Association	
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)	
ICAO	International Civil Aviation Organization	
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air	
IMDG	International Maritime Dangerous Goods Code	
IMDG-Code	International Maritime Dangerous Goods Code	
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008	
IOELV	Indicative occupational exposure limit value	
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 lethality during a specified time interval	
Met. Corr.	Substance or mixture corrosive to metals	
NLP	No-Longer Polymer	
Ox. Liq.	Oxidising liquid	





article number: 1YP2

Abbr.	Descriptions of used abbreviations
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)
S.I. No. 619 of 2001	Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
STEL	Short-term exposure limit
SVHC	Substance of Very High Concern
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Code	Text
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.